



# Current Pre-Algebra PoW

The Math Forum's Problems of the Week provide non-routine constructed response problems. The Pre-Algebra problems target concepts typically learned in grades 6-8. Memberships and mentoring options are available at the individual, class, school, and district levels.

## Totolospì - posted March 24, 2007

The Hopi Indians invented Totolospì, a game of chance. The game is played with three cane dice, a counting board, and a counter for each player. Each cane die can land round side up (r) or flat side up (f).

The moves of the game are determined by tossing the three cane dice with these rules:

Toss	Move
three round sides up (rrr)	player advances 2 lines
three flat sides up (fff)	player advances 1 line
any other toss of the three cane dice	player doesn't advance

Questions:

1. List all the possible tosses (combinations of cane dice landing positions).
2. If landing round side up or flat side up were equally likely, what is the probability that you will be able to advance your counter on a toss?

**Extra:** Do you think it is actually equally likely for a cane die to land round side up or flat side up?

